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INTOLERANCE OF AMBIGUITY AND GENDER DIFFERENCES
BETWEEN HUMANISTS AND NORMATIVISTS

by

JORGE I. MENDOZA

A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Psychology
in the College of Sciences
and in the Burnett Honors College
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ABSTRACT

A study was conducted to test Tomkins' Polarity theory (1963) on the psychological basis for being ideologically liberal or conservative and its relationship with intolerance of ambiguity and gender differences. Normativism, the conservative orientation, was found to have a positive relationship with intolerance for ambiguity. Males were found to be generally less humanist than females. Theoretical background and relevant research is discussed. Suggested applications of this study are to political persuasion, voting behavior, and the psychology of partisanship. This study intends to contribute to the literature on the psychology of ideology, political behavior and ideological differences between men and women.

DEDICATION

To my wonderful mother, for always believing in me and for helping me to be the person I am today. To my friends who have offered advice, assistance, and criticism and for any insightful discussions we have had along the way.

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INTOLERANCE OF AMBIGUITY AND GENDER DIFFERENCES BETWEEN HUMANISTS AND NORMATIVISTS

Political ideology has received extensive study across various fields. In psychology, political ideology has been predominantly studied through the lens of social and personality theories. The role of situation versus disposition in forming political behavior has dominated the theoretical debate over the decades, though more recent literature validates the importance of both. On the topic of personality and ideology, personality variables (mediated through situational context) and traits (or dispositions) have been theorized to aid in the forming and perseverance of one's ideology. More recently, the role of cognition has entered the debate, with studies examining the thinking styles of those with particular orientations, as well as the cognitive-motivational and even biological basis for being oriented towards developing certain ideologies. However, personality remains a domain of intense inquiry in the study of ideology.

The purpose of this study was to assess the relationships between ideological orientation (as described by Tomkins, 1963, 1987), gender and gender role traits, and tolerance for ambiguous situations. The relationships were examined using three scales: the Tomkins Polarity Scale, PS43 Version (Tomkins, 1964; Stone & Schaffner, 1997), the Personal Attributes Questionnaire (Spence, Helmreich & Stapp, 1974) and the Budner Intolerance of Ambiguity Scale (Budner, 1962). To provide an appropriate theoretical framework for the aforementioned concepts, a review of the literature pertaining to political personality theories is necessary. Intolerance of Ambiguity, as a personality variable theorized to interact in the formation and persistence of ideological orientation, is discussed, as well as other related variables. A summary on gender role traits (specifically, instrumental and expressive traits) and gender differences in

their relation to intolerance of ambiguity and ideology are also discussed. Finally, Tomkins' Polarity theory (1963) will be reviewed, with regards to implications for ideological orientation, political identification, gender differences, cognitive style, and relevant contemporary research.

To clarify, traits described as “Expressive” or “Instrumental” are inferred as being more “feminine” or more “masculine” (Spence & Helmreich, 1978). Though these concepts of ‘gender role’, including androgyny, are not explicitly focused on in this study, they are still of relevance in understanding the relationship between self-ascribed gender traits and the Humanist and Normative ideological orientations. Past research involving not only the Personal Attributes Questionnaire but also its precursor, the Bem Sex Role Inventory (Bem, 1974), will be addressed. For the purpose of this study, the focus remains on the conceptualization of gender traits as either instrumental or expressive and how these concepts relate to intolerance of ambiguity and ideology.

Intolerance of Ambiguity

The concept of Ambiguity Intolerance (Frenkel-Brunswik, 1949) was first proposed as an “emotional and perceptual personality variable”. Intolerance of Ambiguity, defined as “the tendency to perceive ambiguous situations as sources of threat” by Budner (1962), is of particular interest for this study in its own right due to past research correlating the concept with political orientation and other personality variables such as Risk Aversion (Johansson, 2000) and its role in assessing for Uncertainty Avoidance (Jost et al., 2007) and Need for Closure (Chirumbolo, 2002). Each of these concepts, respectively, has been shown to correlate with

measures of Conservatism and right-wing thinking styles (Jost et al., 2007; Jost et al., 2003a, 2003b; Skitka et al., 2002; Chirumbolo, 2002). In the past, Intolerance of Ambiguity has been described as, referred to as or a component of ‘Rigidity’¹ or ‘Cognitive Complexity’ (Jost et al., 2003; Ray, 1988; Adorno et al., 1950), though other variables have been expounded on as being related to ideological orientation; this observation merits mention for the relevance of studies correlating such concepts to the other main topics concerned in this study, ideological orientation and instrumental and expressive traits.

Though various scales were developed to measure intolerance of ambiguity, Budner’s has been the most utilized and well regarded in measuring the variable (Furnham & Ribchester, 1995). Budner’s Intolerance of Ambiguity Scale (1962) is a 16-item measure, the central notion to the measure being that intolerance of ambiguity is akin to perceiving ambiguous situations as sources of threat (in this sense, epistemic threat, rather than physical). On the other end, tolerance for ambiguity is indicated by the perception of ambiguous situations as desirable. To Budner, the three different types of ambiguous situations were those that present the individual with a degree of novelty, complexity or insolubility. For example:

“1. An expert who doesn’t come up with a definitive answer probably doesn’t know too much.”

This situation deals with insolubility; an individual who strongly identifies with such a statement cannot perceive someone as holding a level of expertise if they cannot offer a clear-cut answer, however uneasily soluble the question may be. Another question asks:

“15. Teachers or supervisors who hand out vague assignments give a chance for one to show

¹ The Rigidity-of-the-right hypothesis (Jost et al. 2003a, 2003b) suggests that those who hold conservative ideologies are generally more cognitively rigid, and has been suggested by a multitude of ideology research over the decades. This hypothesis is not without criticism however (Greenberg & Jonas, 2003).

initiative and creativity.”

This situation deals with novelty. One who is more tolerant of ambiguity finds a vague assignment to be desirable in that it activates their need to view things from different perspectives and to be creative in doing so.

According to a study on Swedish students by Sidanius (1978, 1985), conservatives displayed a tendency to be more intolerant of ambiguity than liberals; a study on Israeli college students by Fibert and Ressler (1998) came to these same conclusions. Additionally, a study in Japan found student participants with more ‘innovative’ political attitudes were observed to be more tolerant of ambiguity than their moderate and conservative peers (Harada, 1989). Though each culture and country may have different conceptualizations between the ideological left and right, these studies (when reviewed in comparison) nonetheless suggest that intolerance of ambiguity is a personality variable related to one’s ideological orientation and can be cross-culturally observed. Two recent meta-analyses of past ideology research by Jost, Glaser, Kruglanski and Sulloway (2003a, 2003b) and Van Hiel and Mervielde (2010) both find intolerance of ambiguity to be more indicative of right-wing attitudes, beliefs, and ideologies, despite some initial differences in the focus of their studies (Van Hiel and Mervielde investigated research on ideology as related to cognitive ability in addition to cognitive rigidity).

Related Concepts

Webster and Kruglanski (1994) described the concept of Need for Cognitive Closure as one that synthesizes the idea of ambiguity uncertainty into a nonspecific, cognate-motive variable, and define it as a “desire for an answer on any given topic, any answer, compared to

confusion and ambiguity” (p. 1049). In essence, the individual weighs the benefits of perceived closure and the costs of lacking closure. By nonspecific, Webster and Kruglanski are referring to the variable’s impartiality to such concepts as ego-protection or enhancement, which deal exclusively with one’s specific questions about oneself. They suggest that, “Though need for closure may vary as a function of the situation, it may also represent a dimension of stable individual differences” (p. 1050). Need for cognitive closure has been observed in group interaction; Kruglanski and Webster (1991) observed that group members tended to reject dissenters as the proximity to environmental noise and the nearing of a deadline increased, both situations deemed as ones that increase the desire for closure. Webster and Kruglanski (1994) found a positive correlation between intolerance of ambiguity and need for closure, though they had utilized Eysenck’s (1954) Intolerance of Ambiguity scale. Eysenck’s scale included items concerning matters such as religious philosophy and perception of appropriate gender roles, which are not found on the Budner scale.

Kruglanski and Webster (1996) further expounded on the need for cognitive closure by highlighting two motivational tendencies; urgency (quickly attaching to readily available information so as to obtain closure) and permanence tendency (the inclination to establishing past knowledge for present and future use) (Chirumbolo, 2002). Chirumbolo offers that, “the low tolerance for ambiguity expressed by individuals with high need for closure could be a dispositional trait that affects both social behavior and cognitive style” (p. 604). Chirumbolo further details past research on comparing the need for closure with political orientation. Though the cost-benefit description of need for closure makes it appear as a variable that argues for a *homo economicus* approach to cognate-motivation (in that it is assumed individuals are

motivated to do things by rational and salient means consistently), the structure of the need for closure scale (introduced by Webster & Kruglanski, 1994) combines five orthogonal factors, including discomfort occasioned by ambiguity. This factor, Webster and Kruglanski offer, is the affective component of need for closure. In measuring need for closure and political orientation, right-wing and center-right participants scored higher on need for closure (Chirumbolo, 2002).

A study by Johansson (2000) found a positive correlation between risk aversion and intolerance of ambiguity. This finding may have interesting implications for examining relationships between cognitive personality variables and the humanist-normative orientations. When reviewing Tomkins' Script theory (1987), normative ideologies are described as historically being motivated towards social dominance, and Tomkins implies that risk taking is indicative of normative behavior in saying, "If the die is cast toward violence, then excitement and risk taking must be elevated against the more pacific relaxation of enjoyment and communion (p. 175)". This elucidates on a particular duality between the historical conflict premise of Normativism (as described by Tomkins, p. 174) and the child rearing/socialization script of Normativism; the former is arguably inclined towards risk-taking behavior whereas the latter is based on coming to prefer structure and adherence to rules (partly why intolerance of ambiguity is the variable of interest in this study).

Risk aversion may be a content-specific or context-specific result of general intolerance of ambiguity, though further research in regards to ideology may further illuminate on the differences and relationship between the two variables. In their reply to Greenberg and Jonas (2003), Jost et al. (2003b) defend their motivated social cognition hypothesis in regards to the perceived risk taking involved in contemporary economic conservatism by arguing that

conservatives and liberals may take contradictory positions in order to satisfy some other more prevalent sociotropic need. For example, the liberal inclination for more government regulations, which in turn reduces uncertainty, is a means to reduce systemic inequality (such as vast income disparity) that is inherent in a market-based economy. Conservatives on the other hand strongly support the American free market-based economy, which is rife with uncertainty and risk, because it maintains the socioeconomic order, or status quo, that has been established, resulting in the acceptable economic inequality in society (p. 387). Jost (2006) notes that though changes in attitudes and views in regards to what is considered left-wing/liberal and right-wing/conservative do occur, “it is worth distinguishing between core (stable) and peripheral (potentially malleable) aspects of ideological belief systems” (p. 654).

Instrumental and Expressive Traits

The Personal Attributes Questionnaire (Spence & Helmreich & Stapp, 1974, Spence & Helmreich, 1978) is a measure constructed to assess for individuals’ self-perception of adhering to “gender stereotypes” along a dimension of feminine-oriented ‘Expressiveness’ and masculine-oriented ‘Instrumentality’,² with expressiveness being indicative of warm and empathic relations with others and instrumentality being associated with agentic and self-centric relations with others. The PAQ differs from the Bem Sex Role Inventory in that it breaks down the items being assessed on the BSRI (from a masculine-feminine dimension) into a more distinct

² These concepts have been defined as ‘Agency’ and ‘Communion’ in recent literature (Ward, Thorn, Clements, Dixon & Sanford, 2006) in attempts to revise the Personal Attributes Questionnaire by revealing construct inconsistencies through confirmatory factor analysis. Abele and Wojciszke (2007) identify Instrumentality and Expressiveness as components of ‘Agency’ and ‘Communion’.

instrumentality-expressiveness dimension,³ while retaining an equivalent number of items which assess for traits deemed socially desirable to undesirable by both men and women, in effect taking the place of the concept of ‘Androgyny’ from Bem’s scale.

A body of research exists that compares these interrelated concepts to political ideology. Hershey and Sullivan (1977) found that men who rated as androgynous tended to be more politically liberal on many attitudinal items, though not enough to support a strong correlation. Perhaps surprisingly, women who rated higher on masculinity tended to be more politically liberal than their androgynous female counterparts. This partly falls in line with one of the hypotheses to be stated, since rating highly on both expressiveness and instrumentality, should go along with an equivocal resonance with perceptions from both the ideological left and right. As such, this dual-trait attribution may also moderate for rating too extremely on either the left or right of ideological orientation.

Rotter and O’Connell (1982) found that individuals who scored as androgynous (high on both masculinity and femininity) or cross-sexed (i.e., male rating highly on femininity yet lowly on masculinity) on the Bem Sex Role Inventory were more tolerant of ambiguity than those categorized as sex-typed (i.e., female rating highly on femininity and lowly on masculinity) and undifferentiated (i.e. individuals who rate lowly on both masculinity and femininity). However, in a study by Anderson (1986), “androgynous” males were actually found to be less tolerant of ambiguity than either their gender-typed or feminine-identified male counterparts, as well as rating lowly on flexibility and non-conventionality, though these relationships were not found among androgynous females.

³ ‘Instrumentality’ and ‘Expressiveness’ were originally conceptualized by Parson and Bales (1955).

Ideological Orientation

The intersection of psychology and ideology continues to be of significant research interest today. From early on, literature was concerned with pathological theories (Lasswell, 1934) to ideology and personality, while the past several decades have seen a development of motivational and cognitive theories (Jost et al., 2003a). This shift can be interpreted to highlight the equivalent importance attributed to situational as well as dispositional factors and the constant debate concerning situations and dispositions. In regards to the topic of political personality, there is an extensive literature dedicated to its investigation. *The Authoritarian Personality* (Adorno et al., 1950), though primarily concerned with the characteristics of anti-Semitism, was to have a great influence on political personality theories throughout the rest of the 20th century that continues today, despite much criticism.

Altemeyer (1981) introduced his concept of Right-Wing Authoritarianism (RWA)⁴ as an updated model of Adorno et al.'s Authoritarian Personality F-scale. Such theories of political personality have often been associated within the context of an existing left-right binary, with authoritarianism being found on the right-wing, and owe much in their theoretical framework to psychoanalytical concepts in respect to the Freudian tradition. However, Feldman (2003) avers that for all of the attention that Authoritarianism has received, the phenomenon, as he puts it, lacks a well-defined and encompassing theory. Despite these conclusions on authoritarianism, it

⁴ Altemeyer's Right-Wing Authoritarianism (1981) consists of three attitudinal constructs: Authoritarian Submission, Authoritarian Aggression and Conventionalism. Intolerance of Ambiguity, in this theory, is seen as a variable within the cluster of variables accounting for Conventionalism.

remains a topic of contemporary interest (Rubinstein, 1995; Chirumbolo, 2002; Feldman, 2003; Jost et al., 2008).

Early political personality theories were accompanied by concepts theorized to explain to what degree people exhibited certain social and political attitudes. One such concept was Frenkel-Brunswick's 'Ambiguity Intolerance' (1949), first described as a perceptual and emotional personality variable. This variable and others (like Submission to Authority) were measured in attempts to establish relationships between Authoritarian Personality and the political ideology of Conservatism (including General Conservatism, Political Conservatism, and Non-economic conservatism). More recently, a variety of ideology theories have become available, notably one that posits lower cognitive complexity among ideological moderates (Context theory⁵; Sidanius, 1988) and one that posits lower cognitive complexity among those of either ideological extreme (Value Pluralism theory⁶, Tetlock, 1983, 1986; Van Hiel & Mervielde, 2003; Chirumbolo, 2002).⁷

Between these two eras of conceptualizing the psychological basis for ideological behavior, a theory concerned with behavior as a function of affect developed a model for understanding ideology, and has been relatively understudied⁸. Polarity theory (Tomkins, 1963) suggests that ideology in many areas of one's life is based on one's affect towards or against a multitude of ideas as a function of what Tomkins termed an 'ideo-affective response', which

⁵ Sidanius' Context theory (1988) posits that those on the extreme left or right are more cognitively complex than moderates on the premise that these 'ideological extremists' are more motivated to seek information and to argue, leaving themselves open to criticism and having their views confronted.

⁶ Value pluralism theory offers that moderates are higher in cognitive complexity, specifically moderates who hold center-left ideologies (Van Heil & Mervielde, 2003).

⁷ Jost et al. (2003b) compare the structure of these competing theories.

⁸ Jost (2006) discusses the claims of "the end of ideology" in behavioral and social research during the 1960's, resulting in the insufficient inquiry of the topic until the later 1970's.

aggregate into “ideological scripts” (means for interpreting ideological stimuli) that result in individuals resonating with particular ideologies. The measure used to assess for ideology in these terms was developed into the Polarity Scale (Tomkins, 1964), with new versions having been developed over time (Stone & Schaffner, 1997). Individuals who rate as being more humanistic will tend to find liberal or leftist ideas more congenial and to be more open and expressive, whereas those who rate higher on normativism will find conservative or rightist ideas more congenial and to be more orderly and conventional.⁹ However, individuals indeed can rate highly and/or about the same on both Normativism and Humanism. It is adequate to describe the Polarity scale as a non-zero sum measure, as individuals can select one of two perspectives of a given item, both, or none. Therefore, Humanism and Normativism are not exclusive from one another, and do not necessarily exist on a polar dimension as implied in the term “polarity”.

Hypotheses

This thesis investigates the relationships between ideological orientation, gender traits and intolerance of ambiguity, with relevant research and literature serving as a guide. Specifically, the following hypotheses are offered:

H¹. Low intolerance of ambiguity is related to a high rating on humanist orientation.

H². High intolerance of ambiguity is related to a high rating on normative orientation.

H³. High scoring on expressiveness is related to a lower intolerance of ambiguity.

⁹ Recent research supports this view of the ideological left and right through the lens of the Five Factor Model of Personality. A study by Carney, Jost, Gosling and Potter (2008) found that Conservatives rated higher on Conscientiousness and Liberals rated higher on Openness, with no significant relationships for the other three factors of Extraversion, Agreeableness and Neuroticism with ideology.

H⁴. High scoring on instrumentality is related to a higher intolerance of ambiguity.

H⁵. High rating on humanistic as well as normative orientation is related to high scores on both instrumentality and expressiveness.

H⁶. Low rating on humanistic orientation yet high rating on normative orientation is related to low scoring on expressiveness and high scoring on instrumentality.

POLARITY THEORY

Silvan Tomkins (1963) proposed that early socialization and the development of affect¹⁰ towards or against a multitude of ideas and perceptions result in the attraction to particular ideologies; constituting a pervading and recurrent polarity in the explanation of human affairs (Stone & Schaffner, 1997). According to Tomkins' Polarity Theory¹¹ (1965), individuals are attracted to certain ideologies partly as a function of what he termed, 'ideo-affective resonance'; to put it simply, we come to find some ideologies more congenial than others, dependent on the ideological scripts we have developed and continue to operate on. Two orientations, Humanism and Normativism¹², account for the primary ideological orientations in polarity theory, and are further described as the overarching orientations by which all ideological scripts can be defined, within the context of Tomkins' Script Theory (Tomkins, 1978, 1987; Stone, 1986). These orientations serve to guide the individual towards cognitions and perceptions that resonate with the script(s) they operate on.

The Humanist and Normative orientations, according to Tomkins, are defined from each other in several important ways. Humanists are positively inclined towards other human beings, whereas normatives are negatively inclined. Tomkins theorized this to be due to fundamental differences in perceiving the world, specifically whether one looks at the world as shaped and

¹⁰ Affects, according to Tomkins, are the biological embodiment of experienced emotions. Affects are primarily exhibited as a coordination of glandular and muscular structures in the face that depend on sensory feedback for the individual to perceive of their emotions as "acceptable" or "unacceptable" (de St. Aubin, 1996).

¹¹ Tomkins' Polarity Theory was developed during a time when emotion was not taken as seriously in psychological theory apart from the Psychoanalytic school. Over time however, 'hot cognition' research has maintained interest in Polarity theory (Stone, 1986; Jost et al., 2003a).

¹² Despite what the name implies and Tomkins' presenting of humanism and normativism as philosophical polarities, polarity theory does not present the two orientations as existing on a zero-sum dimension (Stone & Schaffner, 1997).

determined by humans and in their interactions with others, or viewing humanity as fallible, and that immaterial forces ultimately determine the order of nature. Secondly, humanists are more apt to express positive affects such as joy, excitement and surprise, whereas normatives are more likely to express the negative affects of contempt, anger and disgust. Lastly, the humanist orientation is contrasted from the normative orientation in that with its valuing of the human experience, experienced phenomena are up for human interpretation, lending themselves to greater openness to new experiences and change, whereas normatives place greater emphasis on a prior existing standard of function and order in the world that supercedes the human experience, lending themselves towards conventionality and upholding tradition.

Ed de St. Aubin et al. (2006) eloquently lay out the appeal of Tomkins' theory in stating that the most important difference which separates Polarity theory from other ideology theories is thus: the orientations of Humanism and Normativism exist within a framework of personality development that allows for interactions between the temperate affect of the individual, the individual's cognate-motives and the environment in which the individual engages (p. 229). In this framework, socialization and affect account for how attractive or aversive ideas are perceived to be, with the individual seeking to maintain ideo-affective resonance. The theory implicitly suggests that maintaining ideo-affective resonance is the process by which certain epistemic needs are met; if we have developed from early on an affection for certain ideas about the world, we will further seek information and interactions in our environment that will resonate with those prior affections. The early development of affect can be attributed to upbringing, parenting style, perceptions of authority figures, and socialization amongst family members. In the idea of parenting style, we observe a distinct polarity: whether a young child is allowed to roam and

explore their environment freely, or whether they are mostly kept within safe parameters, whether by the physical handling of the child by its parents or by physical enclosures (Stone, 1986).

The framework of Tomkins' Polarity theory demonstrates how various long-standing debates found at the core of many relevant matters to human affairs can be clustered into two distinct and overarching ideological *orientations*, not specific ideologies in and of themselves. The relevance to modern day psychological conceptualizations of political ideology is evident (Jost, Glaser, Kruglanski & Sulloway, 2003a; Skitka, Mullen, Griffin, Hutchinson & Chamberlin, 2002). But Polarity theory is not intent on describing ideological orientation solely in the mold of the modern, westernized left-right conceptualization of ideology. Tomkins (1987) describes ideological polarity through historical example that lends credence to understanding the humanist and normative orientations in a cross-cultural context, observable in a wide variety of cultures.¹³

The Polarity Scale

The measure used to assess for ideology in these terms was developed into the Polarity Scale (Tomkins, 1964). Individuals who rate as being more humanistic will tend to find 'liberal' ideas more congenial and to be more open and expressive, whereas those who rate higher on normativism will tend to express higher affect towards 'conservative' ideas and to be more concerned with order and convention.¹⁴ However, the structure of the Polarity scale is

¹³ Tomkins's Script Theory (1987) details this historical explanation, providing insights on how the humanist-normative divide appears in ancient Western and Eastern philosophy, even in "pre-literate" communities.

¹⁴ A recent study by Carney et al. (2008) utilizes a theory of motivated social cognition that appears to coincidentally support Tomkins' Polarity Theory across various methodological domains.

orthogonal rather than unitary, allowing individuals to rate from high to low on both Humanism and Normativism. An individual's score on one orientation does not predict the score for the other (de St. Aubin, 1996). The original 1964 scale consisted of 59 pairs of statements, each pair with a humanist and a normative interpretation of a belief or value. The polarity scale was not disseminated widely from its inception, but various versions of the scale have been developed and utilized over the past decades (Vasquez, 1975; Tomkins, 1987; Stone & Garzón, 1992; Stone & Schaffner, 1997). Items in the PS43 version of the scale allow the individual to choose between the humanistic or the normative interpretation, as well as choosing both or neither (Stone & Schaffner, 1997), this structure reflects an instance in which someone asked Tomkins himself whether he believed humans were basically good or inherently evil, to which he replied, "They're both, and neither" (Tomkins, 1987; de St. Aubin, 1996; Stone & Schaffner 1997).

All of the paired statements used on the scale reflect a polarity evident in various long standing debates that can be traced through history, on such matters as beliefs about human nature, scientific theory, child rearing, political theory, beliefs about society, the foundation of mathematics, theology and various others (Tomkins, 1964; Stone, 1986). For example, in the following item pair:

A) To assume that most people are well-meaning brings out the best in others.

B) To assume that most people are well-meaning is asking for trouble.

We can immediately surmise that statement (A) is the humanistic statement. This view reflects an inclination to perceive others positively, whereas statement (B) reflects a tendency to view others with suspicion and wariness. Another example is the following:

A) Numbers were discovered.

B) Numbers were invented.

The first statement has its philosophical basis in conceiving the origin of mathematics and numbers as being outside of the physical realm, one in which pre-determined and universal laws reside that cannot be changed. The second statement has its basis in the human experience; humans invented representational numeric systems as a means of better interpreting, understanding and navigating the world around us. This debate reflects perhaps the most influential example central to Tomkins' assumption of ideological polarity, as traced back to the Greeks. Plato saw that the realm of the essences, where all absolute truth resides, was separate from humans and nature, whereas Protagoras argued, "man is the measure of all things", that the human experience not only helps us to understand the world but enables us to shape it (Tomkins, 1987). The central tenet is thus, normativism views absolutes as emanating from outside of the realm of the human experience, and humanism sees that the human experience shapes our reality.

Political Ideology, Intolerance of Ambiguity and Related Variables

Although there is a wealth of research done on the relationship between Intolerance of Ambiguity and political ideology, there is no existing literature regarding any relationships between variables such as Intolerance of Ambiguity and Tomkins' Polarity theory of ideology. For the purpose of reference, an overview on the literature concerning political orientation and intolerance of ambiguity (as well as related variables) will be discussed. Concepts like intolerance of ambiguity, need for closure, cognitive rigidity, and openness to experience have been repeatedly measured in past ideology studies (Adorno et al., 1950; Jost et al., 2003a). Such

studies have attempted to find relationships between indicators of cognitive ability and ideological content, but not the motivations behind the content, the developmental origins of the content, or how content comes to be preferred by individuals. Again, we refer to de St. Aubin's (2006) comments on polarity theory, in that its framework integrates the affective components, the cognate-motives and the environment (socialization) of the individual in how they come to perceive and think of the world in the way that they do.¹⁵ Whereas other scales purported to measure psychological ideology tend to be descriptive, the polarity scale's theoretical basis lends it the benefit of appearing more explanatory in structure.

With this thought in mind, it is interesting that very little, if any, empirical research has been conducted in measuring the humanist-normative conceptions of ideology to assess for relationships with what can be arguably described as cognitive personality variables. Jost et al. (2003a) point out that "...affective differences between the left and right are understudied in regards to cognitive differences (p. 362)," though some empirical studies utilizing a form of the polarity scale have sought to reveal differences in affect between normative and humanist-oriented individuals (Vasquez, 1975; Carlson & Brincka, 1987; de St. Aubin, 1996). This current study however is concerned with cognitive differences not between the traditional left and the right conception of identifying as liberal or conservative, but between two orthogonal and affect-based ideological orientations. It's important here to differentiate the one-dimensionality of the traditional left-right conception of political ideology (in which individuals fall somewhere

¹⁵ Winter (2003) describes the four elements of personality in the form of two dimensions, one being inferential-observable and the other being trans-situational and situation-dependent. The elements are cognitions, motives, temperament (traits) and social context. The framework of Tomkins' theory appears to fit into this contemporary conceptualization of personality.

between either ends of the dimension) and the orthogonal relationship of the humanist-normative perspective (in which individuals vary on how humanistic or normative they are).

For the purposes of this study, intolerance of ambiguity is of particular interest due to its significance and relevance in the literature on ideology and personality differences (Frenkel-Brunswick, 1949; Adorno et al., 1950; Budner, 1962; Sidanius, 1978, 1985; Jost et al., 2003a; Jost et al., 2007). Intolerance of ambiguity has been described as a perceptual personality variable, in that those who exhibit it perceive ambiguous situations as sources of (epistemic) threat (Budner, 1962). Polarity theory may posit that a higher normative orientation draws people closer to definitive and clear situations and ideas, whereas more ambiguous situations come to be perceived as contradictory, frustrating, and may elicit such affects as surprise, disgust, contempt or anger. As the role of hot cognition and affect in ideology, attitudes and beliefs have seen increased interest over the past few decades (Jost et al., 2003a), Tomkins' Polarity theory has itself seen increased interest over time, and perhaps further study using the polarity scale can shed light on the cognitive differences between ideological orientations. The contemporary influence of polarity theory and its affective framework in regards to political ideology is evident; Leone and Chirumbolo (2008) found positive relationships between emotion avoidance and support for conservative policies (such as reducing government spending on public health and pre-emptive war on threatening regimes), right-wing authoritarianism and social dominance orientation. This fits with Tomkins' conceptualization of normative ideologies, as they often emphasize self-control and suppression of emotion (Tomkins, 1987).

Stone (1980) concluded that variables such as rigidity and close-mindedness have been consistently found to be more indicative of conservative thinking styles (Jost et al., 2003a). Research over the past few decades has argued for what has been termed the “rigidity of the right” hypothesis (Tetlock, 1983, 1986; Chirumbolo, 2002; Jost et al., 2003a; Leone & Chirumbolo, 2008). This hypothesis assumes that those who hold right-wing ideologies generally exhibit consistent means of fulfilling epistemic needs, namely through such variables as intolerance of ambiguity, need for closure, uncertainty avoidance, need for order and need for structure, among others, resulting in what the literature often refers to interchangeably as cognitive rigidity or low integrative complexity (Jost et al., 2003a).

Sidanius’ (1985) take on ideology and cognitive rigidity however, differs, on the premise that those who lie in the political extremes are more cognitively complex than ‘moderates’, and that depending on which sub-dimension of political ideology individuals operate, some are more ‘complex’ than others. For example, those who operate primarily on the right in social matters tend to be low on cognitive complexity. However, those on the right on economic matters exhibit generally higher cognitive complexity than their sociopolitical conservative counterparts. The argument in Sidanius’ Context theory offers a more situational approach to political ideology than other theories in that it allows people to, as Sidanius puts it: “... acquire sociopolitical attitudes either by active, independent and self-driven incorporation of certain beliefs and values into their larger belief system, or by conforming to the major beliefs and values of the dominant society around them” (p. 638).

Sidanius' reasoning somewhat recalls Tomkins' theory in that it stresses ideological orientation not to be the result of *what* one simply believes, but *how* one has come to believe it. Sidanius further argues that this has implications for the nature of one's information processing and intellectual capabilities. However, polarity theory itself does not account for how cognitively complex humanistic, normative or mix-oriented individuals may be. It could be argued that Tomkins would necessarily disagree that those who may fall in the 'moderate, middle of the road' ideologies would generally be less cognitively complex than their ideological counterparts. Then again, perhaps Tomkins and Sidanius would be in agreement that those who rank highly on both humanism and normativism would tend to be more politically sophisticated and/or information-motivated than individuals who rate lowly on both orientations. This brings context back into consideration, and as has been briefly touched on, 'context' in the form of developmental socialization is important in Tomkins' Polarity theory. The importance of context is evident in the structure of the polarity scale, where scale items in the form of paired statements are integral to measurement.¹⁶ As the role of affect and cognition has steadily gained scholarly interest in the study of the formation of beliefs, attitudes and ideologies, polarity theory serves as a very informative and explanatory basis that merits further research by contemporary scholars.

Polarity Theory and Gender

Tomkins (1987) describes the differences between the genders in their predisposition towards particular ideological scripts. On this matter, polarity theory presents the ideological

¹⁶ In their criticism of de St. Aubin's (1996) version of the polarity scale (in which he decoupled the statements and assigned all items to a 5-point likert format), Stone and Schaffner (1997) argue that isolating the statements alters the task of responding by taking the context inherent in viewing contrasting statements out and allowing for contradictory statements and less self-scrutinizing by respondents in their responses.

differences between genders as marked by a feminine, 'linking' orientation and a masculine, 'ranking' orientation (Gilligan, 1981; Eisler & Loye, 1983; Stone, 1986; Sidanius, Cling & Pratto, 1991). Reasoning that the physical attributions that come to be associated with the genders contribute to a polarity in the interpretation of the world and human affairs between the genders, Tomkins supposes that the masculine dominance orientation is inclined to a more destruction-orientation and that the feminine life-bearing orientation to be averse to it (Tomkins, 1987). The masculine orientation, in its ideological conflict with the feminine orientation, exhibits an aversion to closeness, equality, and acceptance. As such, the masculine interpretation tends to be attracted to ideologies that justify inequality in society, the suppression of emotions, and avoidance of that which is considered foreign, strange or unconventional. As Carlson and Brincka (1987) put it, societal norms place an emphasis on the gender specialization of affects. This thought bears consideration when defining socially desirable gender traits along the two-factor interpretation of masculine-oriented instrumentality and feminine-oriented expressiveness (Spence & Helmreich, 1978, 1980; Spence, Helmreich & Stapp, 1974).

Differences in ideological scripts between the genders suggest males will tend to identify with normative ideologies. One of the most important markers of normative ideologies, at least when it comes to gender differences, is that they espouse a patrimonial interpretation of the world, which would suggest more of an emphasis on those ideas and behaviors in society deemed to best represent masculine strength, justification for social hierarchy and the preference for strict interpretation of laws to maintain order and convention. Unsurprisingly, polarity theory would posit that women are generally more humanist-oriented (Stone, 1986; Tomkins, 1987). There is some support for the notion that women tend to be more opposed to aggression and risk-

oriented policies out of an empathic concern for others. Poole and Zeigler (1985) found women to be significantly more liberal than men on environmental issues and concerns with nuclear power, while generally not being found to be any more liberal than men on other matters. Huddy and Terkildsen (1993) found support for gender traits being a significant factor in political differences; participants were asked to ascribe competency on important political issues to hypothetical male and female candidates, with the female candidate being regarded as more competent on “compassion” issues and the male candidate more competent on economic and defense issues.

Carlson and Brincka (1987) conducted a study that found men were likelier to report a more personal normative posture, while women were likelier to report a more humanistic posture. They also found that respondents overall ascribed more normative affects to the Republican presidential ticket of Reagan and Bush and more humanistic affects to the Democratic ticket of Mondale and Ferraro. This is important considering that the respondents were not asked to directly ascribe ideological orientation to the candidates, but rather apolitical affects, by way of “casting” each candidate as the main role in a hypothetical television sitcom. Humanistic-oriented affects such as joy, distress and shame were ascribed to plots for Mondale and Ferraro, whereas normative-oriented affects like excitement, anger and contempt were ascribed to plots for Reagan and Bush.¹⁷ Similarly, de St. Aubin (1996) found that those with a more humanistic orientation recalled autobiographical memories concerned with an affect cluster of joy, fear, shame and distress, whereas normative-oriented individuals rated significantly

¹⁷ Jost et al. (2003a) note that Carlson and Brincka’s findings may be more telling of participants’ political and gender stereotypes than on actual affective differences between liberals and conservatives. This study’s interest is indeed in those gender traits described as “socially desirable” (partly as a function of a normative society’s specialization of gender roles).

higher on recalling memories involving anger. The centrality of affect to polarity theory is evident, as well as the possible ramifications for ideological orientation as related to affect differences between genders.

Though there has been some research on gender role in regards to political attitudes, views and ideology, gender remains a topic generally under analyzed in political psychology (Eagly & Diekmann, 2006; Sapiro, 2003). Sapiro (2003) observes that research on gender in political psychology often theorizes through the lens of conventional wisdom that gender differences in political orientations and beliefs are shaped by differences in personality traits, emotions, cognitions and communication between men and women (p. 612). Eagly and Diekmann (2006) note that despite relevant criticism about the stereotypical characterization of women's (and men's) thoughts and behaviors, what cannot be discounted is that women and men do differ significantly in general political behavior, such as voting behavior, policy prioritization and evaluating political figures (Carlson & Brincka, 1987; Huddy & Terkildsen, 1993).¹⁸ The specialization of gender traits, in terms of being regarded as socially desirable or undesirable, can be interpreted to constitute a "gender ideology"; sets of attitudes and beliefs about gender relations and roles as well as appropriate gender behavior form an ideological script for gender. There is only one known study to date that has compared gender traits and ideology, in regards to the humanistic-normative orientation. A study by Rice (2006) using the Bem Sex Role Inventory (Bem, 1974) found that feminine trait-identified individuals tended to be more humanistic-oriented whereas masculine trait-identified individuals tended to be more normative-oriented.

¹⁸ Eagly and Diekmann (2006) argue that rather than gender role or traits being the defining factor in political differences between genders, it is the divergence of woman's interests from those of men, as a result of the gender division of labor.

This study suggested that women tend to subscribe to humanistic ideologies whereas men tend to subscribe to normative ideologies.

The current study uses the Personal Attributes Questionnaire (PAQ, Spence, Helmreich and Stapp, 1974) in assessing for any correlation that masculine-oriented instrumentality and feminine-oriented expressiveness may have with humanist and normative ideological orientation. It is important to note that a similar study by Rice (2006) used the Bem Sex Role Inventory in regards to relationships between gender role and the ideological orientations of humanism and normativism, and this study is interested if the results could be replicated. The expectation is that instrumental-identified individuals will be more normative-oriented and that expressive-identified individuals will be more humanistic-oriented. Of additional interest is the identification with instrumentality and expressiveness of those who rate highly on both humanist and normative orientation. It is expected that such individuals will generally identify highly with both instrumental and expressive traits

Relevance of Polarity Theory to current Political Orientation research

Past research has looked at the differences between humanists and normatives in their political preferences, and has included studies that have observed differences in personality and cognitive style between the political right and the left. The aforementioned study by de St. Aubin (1996) also found that humanistic individuals were more inclined to vote for the Democratic candidates in past national elections, whereas normativistic individuals were more inclined to vote for the Republican candidates. It's worth mentioning that polarity theory posits that ideological scripts are primarily based on the manner in which people are socialized from very

early on and the affects they eventually develop towards particular beliefs and values. This can be understood as an argument for the so-called “primacy principle”, which as Easton and Dennis (1969) describe, “What is learned early in life tends to be retained and to shape later attitudes and behavior” (p. 9). Moreover, research in political psychology on attitudes, beliefs and ideologies tends to focus on differences within the sociopolitical and cultural realm; such differences tend to be stable for individuals over time compared to differences on economic issues. However, it can be argued that sociopolitical conflict and cultural change can and often do have an influence on the development of and changing perspective on economic views, such as the proper role of government in the economy and the extent of providing for social welfare (Jost et al., 2003b).

Jost, Nosek and Gosling (2008) describe the resurgence of ideology as a domain of interest to the fields of personality theory, social psychology and political psychology. As Jost et al. (2008) note, the left-right dimension has been usefully applied to understanding political belief systems as guided by two enduring aspects: advocating or resisting to social change and accepting or rejecting inequality. Theories on personality and ideology have for the most part remained consistent on these premises (Adorno et al., 1950; Tomkins, 1965; Altemeyer, 1981; Jost et al., 2003a, 2008; Jost, 2006). Relevant literature and research on ideological and political orientation suggest that these aspects are also evident in cognitive style (Sidanius, 1978, 1985; Tetlock, 1983, 1986; Jost et al. 2003a) as well as our genetics (Alford, Funk & Hibbing, 2005).

Alford et al. (2005) suggest in their genetics studies that there are two phenotypes in regards to ideological orientation. The contextual phenotype is characterized by high empathy, low punitiveness and an optimistic view of human nature, whereas the absolutist phenotype is

marked by acceptance of inequality in society, high punitiveness and support for rigid moral rules (Feldman & Johnston, 2009). Their account of genetic configuration raises the interesting prospect that the structures for exhibiting and experiencing affects may be genetically pre-wired, ergo providing a foundation for later socialization in forming and sustaining ideological scripts, and orienting individuals towards particular ideologies. Interestingly enough, Alford et al. recall Tomkins in describing the two ideological phenotypes as a dimension that credibly accounts for various and consistent dichotomies in human social activity, which, in their view, are based on human behavior predispositions and capabilities (p. 165).

METHOD

Participants

Two hundred-ninety undergraduate Psychology students at a large southeastern university participated in this study. Two hundred ten participants identified as female, seventy-nine participants identified as male, and one participant declined to answer. Participants volunteered for the study and were compensated with one participation credit. In regards to social issues, 60 participants rated themselves as being ‘conservative’, 103 participants rated themselves as ‘liberal’, and one 127 participants failed to rate themselves either way. In regards to political party identification, 101 identified as a Democrat, 60 identified as Republican, 59 identified as Independent, eleven identified as Other and 59 did not identify with a political party.

Materials

Three scales were used in this study. Tomkins’ Polarity Scale (1964; PS43 Version, Stone & Schaffner, 1997) was used to measure ideological orientation. Budner’s Intolerance of Ambiguity Scale (1962) was used to measure participants’ intolerance for ambiguity. The Personal Attributes Questionnaire (Spence & Helmreich, 1974) was used to measure participants’ rating on gender traits, specifically measuring instrumentality, expressiveness and undifferentiated traits. Finally, participants were given a brief demographics survey.

Design

The independent variables in this study were ideological orientation (the participant's levels of humanism and normativism), gender traits (instrumentality and expressiveness) and participants' reported gender. The dependent variable was intolerance of ambiguity. The study used a 2x2 between-subjects design. This procedure included all participants, and a median split was used to assign participants to groups on humanism ($Mdn = 17$) and normativism ($Mdn = 4$) and assigning a numerical label for each participant's score on these concepts in the polarity scale. Participants were then organized into four groups; High humanist-High normative, High humanist-Low normative, Low humanist-High normative and Low humanist-Low normative. An independent samples t-test was also used to test for ideological differences between males and females. Finally, correlation coefficients were run to test the relationships between ideological orientation, intolerance of ambiguity, gender, and instrumental-expressive traits.

Procedure

Participants signed up for the study online through a data collection and research facilitating website at a large southeastern University. Once logged in, participants selected to participate in the study and were given a brief description. Participants were then asked to complete three scales and a demographics survey. Participants were asked to respond honestly and to the best of their understanding. Once complete, participants were granted credit for their participation.

RESULTS

Correlations were run to test for the first four of the initial six hypotheses. The first of the original hypotheses posited a negative relationship between humanism and intolerance of ambiguity ($M = 60.42$, $SD = 8.92$), which despite a low correlation was supported by the data ($r(288) = -.125$, $p < .05$). The second hypothesis, positing a positive relationship between normativism ($M = 5.62$, $SD = 4.41$) and intolerance of ambiguity, was also supported by the data ($r(288) = .21$, $p < .01$).¹⁹ The third hypothesis, positing that those who were higher on expressiveness would be lower on intolerance of ambiguity, was not supported ($r(288) = .024$, $p = .682$); neither was the fourth hypothesis, which posited that high scoring on instrumentality would be related to higher intolerance of ambiguity ($r(288) = -.016$, $p = .782$).

The fifth hypothesis posited that those who were in the High humanist-High normative group would also be likely to rate higher on both instrumentality and expressiveness compared to other groups, which was not supported by the results. To test for this hypothesis, a 2x2 ANOVA looking at the effects of normativism and humanism on expressiveness and another on instrumentality were performed to observe differences between groups on the two concepts independently, revealing that although the High humanist-High normative group rated higher ($M = 31.24$, $SD = 4.00$) than either of the Low humanist groups, it was the High humanist-Low normative group that rated highest on expressiveness ($M = 31.90$, $SD = 4.82$). On instrumentality, the High humanist-High normative group rated higher ($M = 28.04$, $SD = 3.86$)

¹⁹ In their meta-analysis on socio-cultural attitudes and cognitive style, Van Hiel and Mervielde (2010) revealed a moderate correlation between intolerance of ambiguity and right-wing responses on aggregated measures ($r = .22$, $p < .001$).

than either of the Low normative groups, though the Low humanist-High normative group rated highest on instrumentality ($M = 28.29$, $SD = 4.98$).

The sixth hypothesis posited that those in the Low humanist-High normative group would rate higher on instrumentality and lower on expressiveness than other groups. The comparison of the same two 2x2 ANOVA's from before appears to support this hypothesis as the Low humanist-High normative group rated lowest on expressiveness ($M = 30.28$, $SD = 5.35$) and highest on instrumentality ($M = 28.29$, $SD = 4.98$). On expressiveness, there was a main effect for A (humanism, $F(1, 286) = 4.553$, $p = .034$), but no main effect for B (normativism, $F(1, 286) = .573$, $p = .450$) and no AxB interaction effect ($F(1, 286) = .166$, $p = .684$). On instrumentality, there were no main effects for A (humanism, $F(1, 286) = 1.14$, $p = .286$), for B (normativism, $F(1, 286) = 2.243$, $p = .135$) or for the AxB interaction ($F(1, 286) = .393$, $p = .531$).

Further Analyses

Based on the results of the first two hypotheses, the relationships between participants' ratings on normativism and humanism in regards to intolerance of ambiguity were further examined, using a 2x2 between-subjects ANOVA. A main effect was observed for normativism on intolerance of ambiguity ($F(1, 286) = 4.97$, $p = .027$). Figure 1 shows this effect.

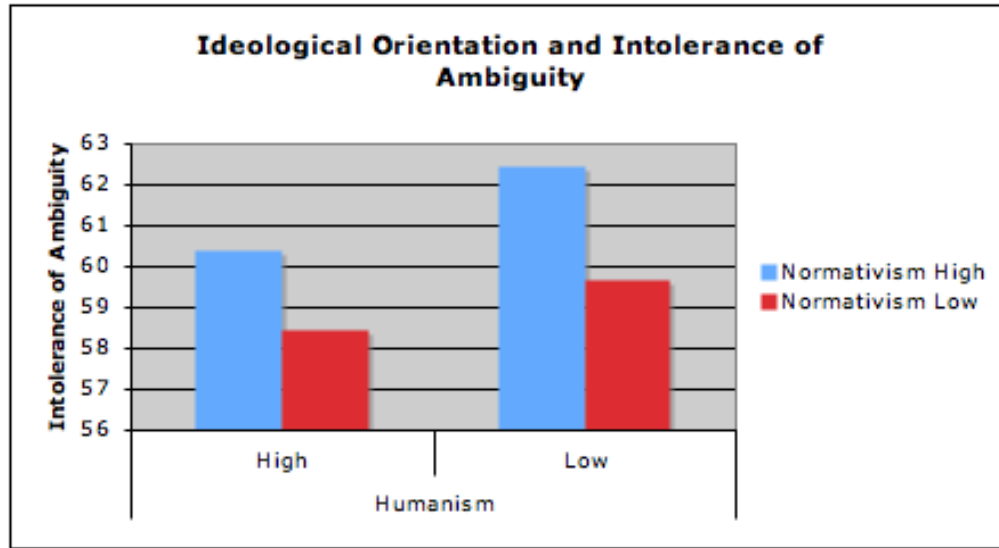


Figure 1: Ideological Orientation and Intolerance of Ambiguity.

Three 2x2x2 ANOVAs were performed to test for effects and interactions among reported gender and scores on humanism and normativism in regards to intolerance of ambiguity, expressiveness and instrumentality. On intolerance of ambiguity, there were no significant main effects for A (humanism, $F(1, 281) = 2.361, p = .126$), for B (normativism, $F(1, 281) = 3.024, p = .083$), or for C (gender, $F(1, 281) = 2.526, p = .113$), and no interaction effects for AB (humanism * normativism, $F(1, 281) = .301, p = .584$), AC (humanism * gender, $F(1, 281) = .002, p = .966$), BC (normativism * gender, $F(1, 281) = .242, p = .623$), and ABC (humanism * normativism * gender, $F(1, 281) = .12, p = .729$). On expressiveness, , there were no significant main effects for A (humanism, $F(1, 281) = 3.026, p = .083$), for B (normativism, $F(1, 281) = .454, p = .501$), or for C (gender, $F(1, 281) = 1.551, p = .214$), and no interaction effects for AB (humanism * normativism, $F(1, 281) = .586, p = .445$), AC (humanism * gender, $F(1, 281) = .016, p = .901$), BC (normativism * gender, $F(1, 281) = .004, p = .952$), or for the ABC

interaction (humanism * normativism * gender, $F(1, 281) = .589, p = .443$). On instrumentality, there were no significant main effects for A (humanism, $F(1, 281) = .245, p = .621$), for B (normativism, $F(1, 281) = 2.369, p = .125$), or for C (gender, $F(1, 281) = 1.091, p = .297$), and no interaction effects for AB (humanism * normativism, $F(1, 281) = .732, p = .393$), for AC (humanism * gender, $F(1, 281) = .635, p = .426$), for BC (normativism * gender, $F(1, 281) = .150, p = .699$), or for the ABC interaction (humanism * normativism * gender, $F(1, 281) = .504, p = .479$).

Independent samples t-tests were used to test for ideological and gender trait differences between genders. Results demonstrated that females ($M = 5.37, SD = 4.18$) were less normative-oriented than males ($M = 6.32, SD = 4.96$), $t(287) = -1.63, p = .007$. Additionally, marginally significant results were found for females ($M = 27.61, SD = 4.37$) identifying as less instrumental than males ($M = 28.39, SD = 5.29$), $t(287) = -1.272, p = .053$. Correlations revealed a relationship between gender and humanism, with males ($M = 15.58, SD = 5.97$) generally less humanist-oriented than females ($M = 17.77, SD = 6.7$) ($r(288) = -.17, p < .01$). Significant correlations from the initial hypotheses and further analysis are displayed in Table 1.

Table 1: Correlation Analysis

Correlations of gender, ideological rating and intolerance of ambiguity			
	Normativism	Humanism	Intolerance of Ambiguity
Normativism	-	-.138*	.210**
Humanism	-.138*	-	-.125*
Intolerance of Ambiguity	.210**	-.125*	-

** Correlation is significant at the .01 level

* Correlation is significant at the .05 level

DISCUSSION

Originally it was proposed that intolerance of ambiguity was a variable related to a more normative orientation and that tolerance of ambiguity was higher among those who were humanist-oriented, based on past research and literature on intolerance of ambiguity and political orientation. Additionally, guided by Tomkins' conceptualization of the ideological divide as partly rooted in society's specialization of gender roles and the inherent dialectical conflict that arises from it, it was proposed that masculine-oriented instrumental traits were more indicative of a normative orientation and that feminine-oriented expressive traits were more indicative of a humanist orientation. Though there was support for the first two hypotheses, there wasn't any conclusive support for the remaining four.

It was anticipated that scores on humanism would be substantially higher than normativism scores, based on the assumption that the student body of a large college campus tends to be more socially liberal than the general population. To illustrate, our design involved labeling participants who may have scored a '14' on humanism but a '6' on normativism as 'Low humanist-High normative'. Having all participants be college students mostly ranging in age from 18 to their mid-twenties contributes to this, demonstrating a key issue in social science research, as far as applying the results to the general population. An expanded study accounting for a more diverse general population, specifically with a more diverse age-group constituency, would presumably see the mean for normativism increase.

The 2x2 ANOVA suggested that the higher one's score on intolerance of ambiguity, the higher their score on normativism tended to be (in conjunction with a lower score on humanism),

as did the correlation between scores on normativism and intolerance of ambiguity. Despite the fact that the age-makeup of the sample was considerably homogeneous, the implication here is that even at comparatively low levels of normativism within this sample, there was enough of a difference between those individuals scoring in the range of 5-8 on normativism and those who scored 4 and below. Further statistical analysis on the current data should investigate this assumption.

Correlations and independent samples t-tests revealed ideological differences between genders, with males generally being more normative-oriented and females being generally more humanist-oriented, lending support to Tomkins' view on the gender component to ideology (1987). No statistically significant results were found in regards to instrumental and expressive gender traits, contradicting past research (Rice, 2006). This perhaps reflects that the measure for these variables, the PAQ (Personal Attributes Questionnaire), may not be relevant in comparing ideological differences between genders, and that perhaps instrumentality and expressiveness are means by which individuals conform to their perceived gender role, not as factors that have any significant role or relationship with one's ideological orientation. Further research on the more overarching concepts of Agency and Communion, with their inference to individualistic and collectivist perceptions (Ward et al., 2006; Abele & Wojcizke, 2007) is suggested, and may reveal how these apply to ideological orientation.

Another limitation with the use of the PAQ is the possibility of social desirability bias. Since the PAQ measures gender traits along three subscales that are described as socially desirable to undesirable (for males, females and for both males and females), individuals may

tend to rate themselves favorably; this is a common criticism of this and other similar measures. Budner's Intolerance of Ambiguity scale is a self-reported measure that brings with itself the inherent assumption that intolerance of ambiguity is a generalized personality trait. Durrheim and Foster (1997) provide a critique of the scale's content-specificity and its lack of defining "structural properties" of personality. They developed their own scale, the Attitudinal Ambiguity Tolerance Scale, which they argue fulfills Rokeach's (1956) requirement of delineating structure from content in studying ideological attitudes. For example, they offer that the connotation of words such as "strict" (negative) and "lenient" (positive) elicit different attitudes when referring to different domains of authority, such as parents, governments, employers and law enforcement, and that a researcher can never be certain that the participant perceives the same content in these relationships as the researcher does (p. 742). The scale itself however was specific to the population in which it was tested in (South Africa) and further progress on a more generalized version is mostly lacking. Further investigation on assessing for cross-content variability and accounting for the structural framing of otherwise attitudinal dispositions is suggested in regards to ambiguity intolerance.

CONCLUSION

Furnham and Ribchester (1995) note that one example of one's exhibition of intolerance for ambiguity is the inability to perceive both good and bad traits in the same person. Polarity theory would argue that being a fairly normative-oriented individual is not what will determine whether they carry such a perception with them, but that being humanistic-oriented, whether on its own or in conjunction with normativism, better enables one in perceiving an individual as holding both positive and negative qualities. However, normative-oriented individuals are likelier to be intolerant of ambiguity as a function of resonating more with certainty, structure and convention.

The other major component of this study was in comparing gender traits (as conceptualized into 'instrumentality' and 'expressiveness' by Spence and Helmreich, 1978) with humanist and normative orientations. With the understanding of masculine-oriented instrumental traits and feminine-oriented expressive traits as they are defined, and with the background of past research on gender and ideology and the literature concerning gender and polarity theory (Tomkins, 1987; Carlson & Brincka, 1987; Rice, 2006), it was reasonable to question if there were any relationships between normative orientation with instrumental traits and between humanistic orientation and expressive traits. Tomkins' (1987) historical approach to the development of ideologies lays out Polarity theory's case for observing differences in the ideological orientation men and women are generally inclined towards. Future study in this area may reveal further insights in to how men and women are attracted to particular ideological thinking styles.

Jost et al.'s (2003a) meta-analysis of past studies looking at psychological differences between the left and the right incorporated literature and past research on polarity theory, among various other theories. Van Hiel and Mervielde (2010) however bring up relevant criticisms of Jost et al.'s meta-analysis, which mostly aggregated studies concerned with self-reported psychological variables. This is a significant criticism; if cognitive and perceptual differences between the ideological left and right are to be better examined, Van Hiel and Mervielde suggest future research should empirically observe these differences by means of objective tasks. Furthermore, they argue that Jost et al. concentrated their analysis on motivated information processing while implicitly discounting the role that cognitive ability can have in impairing information processing (p. 1766). In their own meta-analysis, Van Hiel and Mervielde focused their aggregation on objective measurements of cognitive style (such as intelligence, reasoning ability and years of education) in relation to socio-cultural attitudes. However, due to lack of sufficient research, their meta-analysis did not include research on “economic-hierarchical” ideological differences. Future research should explore this dimension as well in addition to the socio-cultural dimension of ideology. Polarity theory's account for ideological differences as based in affect and early socialization is limited in respect to observing such economic-hierarchical differences, though it is implied that normative ideologies are system-justifying in regards to economic hierarchy, with their preference towards stability, convention and adherence to rules.

Affective differences between humanists and normative have been observed (Carlson & Brincka, 1987, de St. Aubin, 1996), yet cognitive differences remain under evaluated. Current focus on ‘hot cognition’ in various areas of study should increase the wealth of directions in

which to examine ideological differences. One direction suggested is to objectively examine the affective basis for particular variables associated with cognitive rigidity, such as examining reactions to the presentation of ambiguous stimuli (whether visually or audibly introduced) with physiological response-recording equipment, and measuring levels of cognitive stress, and comparing results with participants' scores on the polarity scale.

Continued efforts in examining polarity theory may offer researchers many important insights not only in how past understandings of the psychology of ideology may inform future research, but in further conceptualizing the possible affective bases to cognitive style in relation to ideology. Partisanship at the elite level and the so-called “culture wars” are two of the most notable examples of ideological polarity in our society, marked by a consistent and highly emotional narrative accompanying it. Depending on the context of events in other regions of the world, these forms of political and cultural conflict continue to persist, often marked by forces that differ on their acceptance of societal inequality and their tolerance for change (Jost, 2003a). Furthermore, further studying the affective base for ideological orientation may hold significant implications for political persuasion, the framing of policy to the public, and understanding particular motivations in voting behavior, such as protest voting, motivated avoidance of candidates, policies and media that we do not find “congenial” (as a product of being very ideologically partisan), and how different ideologies appeal to men and women.

APPENDIX A: IRB APPROVAL LETTER

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University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Jorge I Mendoza**

Date: **January 20, 2011**

Dear Researcher:

On 1/20/2011, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: IRB Initial Submission Form
Project Title: Intolerance of Ambiguity and Instrumentality-Expressiveness
among College Students: A Study in Polarity Theory
Investigator: Jorge I Mendoza
IRB Number: SBE-10-07347
Funding Agency: None

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Joseph Bielitzki, DVM, UCF IRB Chair, this letter is signed by:

Signature applied by Janice Turchin on 01/20/2011 03:43:56 PM EST

A handwritten signature in black ink that reads 'Janice Turchin'.

IRB Coordinator

APPENDIX B: INTOLERANCE OF AMBIGUITY SCALE

APPENDIX B: INTOLERANCE OF AMBIGUITY SCALE

Intolerance of Ambiguity Scale

Budner (1962)

Instructions: Please respond to the following statements by indicating the extent to which you agree or disagree with them. Fill in the blanks with the number from the rating scale that best represents your evaluation of the item.

Rating Scale:

1. Strongly disagree
2. Moderately disagree
3. Slightly disagree
4. Neither agree nor disagree
5. Slightly agree
6. Moderately agree
7. Strongly agree

- _____ 1. An expert who doesn't come up with a definite answer probably doesn't know too much.
- _____ 2. I would like to live in a foreign country for a while.
- _____ 3. There is really no such thing as a problem that can't be solved.
- _____ 4. People who fit their lives to a schedule probably miss most of the joy of living.
- _____ 5. A good job is one where what is to be done and how it is to be done are always clear.
- _____ 6. It is more fun to tackle a complicated problem than to solve a simple one.
- _____ 7. In the long run it is possible to get more done by tackling small, simple problems rather than large and complicated ones.
- _____ 8. Often the most interesting and stimulating people are those who don't mind being different and original.
- _____ 9. What we are used to is always preferable to what is unfamiliar.
- _____ 10. People who insist upon a yes or no answer just don't know how complicated things really are.

- _____ **11** A person who leads an even, regular life in which few surprises or unexpected happenings
 . arise really has a lot to be grateful for.
- _____ **12** Many of our most important decisions are based upon insufficient information.
 .
- _____ **13** I like parties where I know most of the people more than ones where all or most of the
 . people are complete strangers.
- _____ **14** Teachers or supervisors who hand out vague assignments give one a chance to show
 . initiative and originality.
- _____ **15** The sooner we all acquire similar values and ideals the better.
 .
- _____ **16** A good teacher is one who makes you wonder about your way of looking at things.
 .

Scoring the Scale

To score the instrument, the *even-numbered* items must be reverse-scored. That is, the 7s become 1s, the 6s become 2s, 5s become 3s and the 4s remain the same. After reversing the even-numbered items, sum the scores for all 16 items to get your total score. Higher scores indicate a greater *intolerance* for ambiguity.

YOUR SCORE	
-------------------	--

Average range: 44-48

Comparison Data

New York psychology students	50.9
Engineering students	48.9
Advanced sociology students	49.3
Nursing students	51.9
High school honor students	48.2
Eastern medical students	44.6
Midwestern medical students	45.2

Budner, S. (1962). Intolerance of Ambiguity as a Personality Variable. *Journal of Personality*, 30, 29-50.

APPENDIX C: PERSONAL ATTRIBUTES QUESTIONNAIRE

APPENDIX C: PERSONAL ATTRIBUTES QUESTIONNAIRE

Personal Attributes Questionnaire (Spence, Helmreich & Stapp, 1974)

Instructions:

The items below inquire about what kind of person you think you are. Each item consists of a PAIR of characteristics, with the letters A-E in between. For example,

Not at all artistic A.....B.....C.....D.....E Very artistic

Each pair describes contradictory characteristics - that is, you cannot be both at the same time, such as very artistic and not at all artistic.

The letters form a scale between the two extremes. You are to choose a letter which describes where YOU fall on the scale. For example, if you think that you have no artistic ability, you would choose A. If you think that you are pretty good, you might choose D. If you are only medium, you might choose C, and so forth.

M-F	1.	Not at all aggressive	A.....B.....C.....D.....E	Very aggressive*
M	2.	Not at all independent	A.....B.....C.....D.....E	Very independent*
F	3.	Not at all emotional	A.....B.....C.....D.....E	Very emotional*
M-F	4.	Very submissive	A.....B.....C.....D.....E	Very dominant*
M-F	5.	Not at all excitable in a major crisis*	A.....B.....C.....D.....E	Very excitable in a major crisis
M	6.	Very passive	A.....B.....C.....D.....E	Very active*
F	7.	Not at all able to devote self completely to others	A.....B.....C.....D.....E	Able to devote self completely to others*
F	8.	Very rough	A.....B.....C.....D.....E	Very gentle*
F	9.	Not at all helpful to others	A.....B.....C.....D.....E	Very helpful to others*
M	10.	Not at all competitive	A.....B.....C.....D.....E	Very competitive*
M-F	11.	Very home oriented	A.....B.....C.....D.....E	Very worldly*
F	12.	Not at all kind	A.....B.....C.....D.....E	Very kind*
M-F	13.	Indifferent to others= approval*	A.....B.....C.....D.....E	Highly needful of others' approval
M-F	14.	Feelings not easily hurt*	A.....B.....C.....D.....E	Feelings easily hurt
F	15.	Not at all aware of feelings of others	A.....B.....C.....D.....E	Very aware of feelings of others*
M	16.	Can make decisions easily*	A.....B.....C.....D.....E	Has difficulty making

				decisions
M	17.	Gives up very easily	A.....B.....C.....D.....E	Never gives up easily*
M-F	18.	Never cries*	A.....B.....C.....D.....E	Cries very easily
M	19.	Not at all self-confident	A.....B.....C.....D.....E	Very self-confident*
M	20.	Feels very inferior	A.....B.....C.....D.....E	Feels very superior*
F	21.	Not at all understanding of others	A.....B.....C.....D.....E	Very understanding of others*
F	22.	Very cold in relations with others	A.....B.....C.....D.....E	Very warm in relations with others*
M-F	23.	Very little need for security*	A.....B.....C.....D.....E	Very strong need for security
M	24.	Goes to pieces under pressure	A.....B.....C.....D.....E	Stands up well under pressure*

The scale to which each item is assigned is indicated by M (Masculinity), F (Femininity) and M-F (Masculinity-Femininity)

Items with an asterisk indicate the extreme masculine response for the M and M-F scales and the extreme feminine response for the F scale. Each extreme masculine response on the M and M-F scales and the extreme feminine response on the F scale are scored 4, the next most extreme scored 3, etc.

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APPENDIX D: POLARITY SCALE (PS43)

APPENDIX D: POLARITY SCALE (PS43)

POLARITY SCALE*

by Silvan S. Tomkins

Instructions

Consider each of the following pairs of ideas, A and B, and decide which of them you agree with. If you agree with both ideas, you can answer "C" on your answer sheet. If you agree with neither, answer "D". Blacken A if you agree with the idea on the left. Blacken B if you agree with the idea on the right. If you agree with the idea on the left, and also the idea on the right, blacken C. If you disagree with both ideas, blacken circle D for that item.

Remember:

A = Left

B = Right

C = Both

D = Neither

A = you choose the left idea

B = you choose the right idea

C = you like both ideas

D = you care for neither idea

1. (A) Children should be taught to obey what is right even though they may not always feel like it.
1. (B) Children should be encouraged to express themselves even though parents may not always like it.
2. (A) If I break the law, it is not always to my advantage or to the advantage of society that I be punished.
2. (B) If I break the law I should be punished for the good of society.
3. (A) The most important aspect of science is that it enables you to realize yourself by gaining understanding and control of the world around you.
3. (B) The most important aspect of science is that it enables you to separate the true from the false, the right from the wrong, reality from fantasy.
4. (A) Play is childish. Although it is proper for children to play, adults should concern themselves with more serious matters.

4. (B) Play is important for all human beings. No one is too old to enjoy the excitement of play.
5. (A) The maintenance of law and order is the most important duty of any government.
5. (B) Promotion of the welfare of the people is the most important function of a government.
6. (A) To assume that most people are well-meaning brings out the best in others.
6. (B) To assume that most people are well-meaning is asking for trouble.
7. (A) Parents should first of all be gentle with children.
7. (B) Parents should first of all be firm with children.
8. (A) Children must be loved so that they can grow up to be fine adults.
8. (B) Children must be taught how to act so that they can grow up to be fine adults.
9. (A) A government should allow freedom of expression even though there is some risk in permitting it.
9. (B) A government should allow only such freedom of expression as is consistent with law and order.
10. (A) What children demand should be of little consequence to their parents.
10. (B) What children demand, parents should take seriously and try to satisfy.
11. (A) When people are in trouble, they should help themselves and not depend on others.
11. (B) When people are in trouble, they need help and should be helped.
12. (A) Competition brings out the best in human beings.
12. (B) Cooperation brings out the best in human beings.
13. (A) The most important thing in the world is to know yourself and be yourself.
13. (B) The most important thing in the world is to try to live up to the highest standards.
14. (A) The main purpose of education should be to enable the young to discover and create novelty.
14. (B) The main purpose of education should be to teach the young the wisdom of the remote and recent past.
15. (A) Juvenile delinquency is simply a reflection of the basic evil in human beings. It has always existed in the past and it always will.
15. (B) Juvenile delinquency is due to factors we do not understand. When we do understand these we will be able to prevent it in the future.
16. (A) When you face death you learn how basically insignificant you are.

16. (B) When you face death, you learn who you really are and how much you loved life.
17. (A) Great achievements require first of all great imagination.
17. (B) Great achievements require first of all severe self- discipline.
18. (A) If human beings were really honest with each other, there would be a lot more antipathy and enmity in the world.
18. (B) If human beings were really honest with each other, there would be a lot more sympathy and friendship in the world.
19. (A) The beauty of theorizing is that it has made it possible to invent things that otherwise never would have existed.
19. (B) The trouble with theorizing is that it leads people away from the facts and substitutes opinion for truth.
20. (A) Imagination leads people into self-deception and delusions.
20. (B) Imagination frees people from the dull routines of life.
21. (A) Thinking is responsible for all discovery and invention.
21. (B) Thinking keeps people on the straight and narrow.
22. (A) It is disgusting to see an adult cry.
22. (B) It is distressing to see an adult cry.
23. (A) Fear can make the bravest person tremble. We should not condemn a failure of nerve.
23. (B) Cowardice is despicable and in a soldier should be punished.
24. (A) When a person feels sorry for himself, he really needs more sympathy from others.
24. (B) When a person feels sorry for himself, he really should feel ashamed of himself.
25. (A) Some people can only be changed by humiliating them.
25. (B) No one has the right to humiliate another person.
26. (A) Human beings are basically evil.
26. (B) Human beings are basically good.
27. (A) Those who err should be forgiven.
27. (B) Those who err should be corrected.
28. (A) Anger should be directed against the oppressors of mankind.
28. (B) Anger should be directed against those revolutionaries who undermine law and order.
29. (A) Familiarity like absence makes the heart grow fonder.
29. (B) Familiarity breeds contempt.

30. (A) Numbers were invented.
30. (B) Numbers were discovered.
31. (A) Reason is the chief means by which human beings make great discoveries.
31. (B) Reason has to be continually disciplined and corrected by reality and hard facts.
32. (A) The changeableness of human feelings is a weakness in human beings.
32. (B) The changeableness of human feelings makes life more interesting.
33. (A) Human beings should be loved at all times, because they want and need to be loved.
33. (B) Human beings should be loved only if they have acted so that they deserve to be loved.
34. (A) There are a great many things in the world which are good for human beings and which satisfy them in different ways. This makes the world an exciting place and enriches the lives of human beings.
34. (B) There are a great many things which attract human beings. Some of them are proper, but many are bad for human beings, and some are very degrading.
35. (A) Children should be seen and not heard.
35. (B) Children are entirely delightful.
36. (A) In order to live a good life you must act like a good person, i.e. observe the rules of morality.
36. (B) In order to live a good life you must satisfy both yourself and others.
37. (A) Mystical experiences may be sources of insight into the nature of reality.
37. (B) So-called mystical experiences have most often been a source of delusion.
38. (A) You must always leave yourself open to your own feelings - alien, as they may sometimes seem.
38. (B) If sanity is to be preserved, you must guard yourself against the intrusion of feelings which are alien to your nature.
39. (A) To act on impulse is to act childishly.
39. (B) To act on impulse occasionally makes life more interesting.
40. (A) Human beings should be treated with respect at all times.
40. (B) Human beings should be treated with respect only when they deserve respect.
41. (A) There is no surer road to insanity than surrender to the feelings, particularly those which are alien to the self.
41. (B) There is a unique avenue to reality through the feelings, even when they seem alien.

42. (A) Life sometimes smells bad.
42. (B) Life sometimes leaves a bad taste in the mouth.
43. (A) The mind is like a lamp which illuminates whatever it shines on.
43. (B) The mind is like a mirror which reflects whatever strikes it.

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Polarity Scale

SCORES, KEY, INTERPRETATION (Form PS43) Major Scores

The major scores in the Polarity Scale are:

1. **The number of L** (Left Wing or Humanistic) responses. This is the sum of all responses keyed as Left Wing (either A or B).
2. **The number of Both responses.** This is the sum of all "C" responses. Each such double response is given a score of one on the Both score. Thus if a subject answered "C" to every item-pair in the entire test her Both response score would be 43.
3. **The number of R** (Right Wing or Normative) responses. This is the sum of all responses keyed as Right Wing (A or B). (It is possible for a subject to have a zero Left Wing score and a zero Right Wing score if he has a Both score of 43 obtained by answering "C" on every item-pair).
4. **The number of Neither responses.** This is the sum of all the subject's "D" responses. (In the original Polarity Scale, "Neither" was scored when the subject made no response to either item of the pair, thus it was uncertain whether she meant "neither" or simply had skipped that item-pair).

How to Score

The Scoring Key appears on the following page. Humanistic, Normative, Both and Neither scores sum to 43. **Note:** These instructions for the 43-item version (PS43) are adapted from

Silvan S. Tomkins's 1966 instructions. His comments are reproduced here with little modification, as they reflect his original thinking. (W.F. Stone, July, 1997).

PS43 Scoring Key

Starting with the item-pair #1, the following gives the key for an "A" response. Thus, for item-pair 1, an "A" is a Right Wing (Normative) response (R). for item-pair 2, an "A" is a Left Wing (Humanistic) response (L), etc.

1. R 2. L 3. L 4. R 5. R 6. L 7. L 8. L 9. L

10. R 11. R 12. R 13. L 14. L 15. R 16. R

17. L 18. R 19. L 20. R 21. L 22. R 23. L 24. L

25. R 26. R 27. L 28. L 29. L 30. L 31. L 32. R 33. L

34. L 35. R 36. R 37. L 38. L 39. R 40. L 41. R 42. R 43. L

Stone, W.F. & Schaffner, P.E. (1997). *Bulletin of the Tomkins Institute*, 4: Fall-Winter 1997, pp.

17-22

APPENDIX E: DEMOGRAPHICS SURVEY

APPENDIX E: DEMOGRAPHICS SURVEY

1) Age: _____ years old

2) Gender: (Indicate One)

F (female) M (male) T (transgender)

3) Ethnic Identification: (Indicate One)

Caucasian-American/White African-American/Black Hispanic/Latino-American

Asian-American/Pacific Mixed Racial Background Native American

4) Did you vote in the recent 2010 Midterm Elections?

Yes No

5) Political Party Affiliation (Indicate One)

Democrat Independent Republican Other

6) Overall Orientation on Social Issues

Conservative Liberal

7) Diet Lifestyle

Omnivorous Ovo-Lactive Vegetarian Vegan

8) Religiosity (Indicate One)

Strongly Religious Fairly Religious

Non-Practicing Faithful Agnostic Atheistic

9) Religious Upbringing (Indicate One)

Strong Fair Little None

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